

**REMARKS**

Claims 1-93 are pending in the present application. The Examiner has objected to claims 33-38 and 70-75 and has rejected claims 1-32, 39-69 and 76-93. The Examiner has also indicated that claims 33-38 and 70-75 include patentable subject matter. Applicants have amended claims 33 and 70, rewriting them into independent form.

**I. ALLOWABLE SUBJECT MATTER**

Applicants would like to thank the Examiner for indicating that claims 33-38 and 70-75 include patentable subject matter. The Examiner states that the claims would be allowable if rewritten in independent form including all of the elements of the base claim and any intervening claims.

Applicants have amended claim 33 to include the elements recited in a base claim (i.e., claim 1) and an intervening claim (i.e., claim 32). It is respectfully submitted that claim 33 and claims 34-38, which depend from claim 33, are in condition for allowance.

Furthermore, Applicants have amended claim 70 to include the elements recited in a base claim (i.e., claim 61). It is respectfully submitted that claim 70 and claims 71-75, which depend from claim 70, are in condition for allowance.

**II. REJECTION OF CLAIMS 1-14, 23-32, 39-61 and 76-93 UNDER 35 U.S.C. § 102(e)**

Claims 1-14, 23-32, 39-61 and 76-93 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,285,865 B1 ("Vorenkamp"). Applicants respectfully traverse the rejection.

**A. Rejection under 35 U.S.C. § 102(e)**

Although the Examiner has indicated that the anticipation rejection is based on 35 U.S.C. § 102(b), Applicants respectfully submit that the anticipation rejection should be based on 35 U.S.C. § 102(e). Vorenkamp has a publication date that coincides with its issue date of September 4, 2001. The present application (i.e., Application Ser. No. 09/698,550) has an actual filing date of October 27, 2000. Since the actual filing date of the present application antedates the publication date of Vorenkamp, the anticipation rejection cannot be based on 35 U.S.C. § 102(b). However, Vorenkamp may be offered as a reference under 35 U.S.C. § 102(e).

In relevant part, 35 U.S.C. § 102(e) states that “[a] person shall be entitled to a patent unless ... the invention was described in ... a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent”.

It is therefore respectfully submitted that the Examiner intended to maintain anticipation rejection based on Vorenkamp under 35 U.S.C. § 102(e).

Claims 1-14, 23-32, 39-61 and 76-93 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Vorenkamp. Applicants respectfully traverse the rejection.

**B. Claims 1-14 and 23-32**

Vorenkamp does not describe each and every element as set forth in claim 1. For example, claim 1 recites, in part, that a mixer comprises a track and hold circuit and a bandpass circuit. The Examiner maintains that a track and hold circuit is described in block 506 of FIG. 5; block 1916 of FIG. 19; col. 1, line 62 to col. 2, lines 6; and col. 6, line 35 to col. 7, line 41 of Vorenkamp. However, block 506, 1916 of FIG. 5, 19, respectively, is merely described, without detail, as a first mixer. In addition, the cited text supporting the rejection fails to mention a track and hold circuit. As set forth in claim 1, the mixer comprises a track and hold circuit and a bandpass circuit. The cited figures do not illustrate nor do the cited text of Vorenkamp describe a mixer comprising such elements. For at least the above reasons, Vorenkamp does not anticipate claim 1.

Furthermore, Applicants respectfully submit that Vorenkamp does not describe each and every element as set forth in claims 2-14 and 23-32, which depend from claim 1. For example, claim 3 recites that the track and hold circuit comprises first and second output signals and that the mixer further comprises a buffer to combine the first and second output signals. The Examiner maintains that the track and hold circuit comprising first and second output signals is described in col. 12, lines 1-23 and col. 18, lines 35-64 of Vorenkamp. Col. 12, lines 1-23 appear to refer to FIG. 5; however, none of the components shown in FIG. 5 have first and second output signals. Col. 18, lines 35-64 relate to a differential crystal oscillator 710 coupled to a differential linear buffer integrated circuit 720; however, there is no description of a track and hold circuit as set forth in claim 3. In another example, claim 8 recites a transistor comprising a drain and a bandpass circuit comprising a capacitor coupled to the drain. The Examiner maintains that these elements are described in FIGS. 5 and 19; col. 23, lines 20-53; and col. 40, line 31 to col. 41, line 31 of Vorenkamp. However, a bandpass circuit comprising a

capacitor as set forth in claim 8 is not described in any of the cited figures or cited texts. In fact, a bandpass circuit comprising a capacitor is not mentioned in any of the citations provided by the Examiner. In yet another example, claim 9 recites that the bandpass circuit further comprises an inductor coupled to a source of a transistor. The Examiner maintains that these elements are described in col. 20, line 29 to col. 21, line 32 of Vorenkamp. However, a bandpass circuit comprising an inductor as set forth in claim 9 is not described in the cited text. In fact, there is no mention of an inductor at all. For at least the above reasons, Vorenkamp does not anticipate claims 2-14 and 23-32.

It is therefore respectfully requested that the rejection be withdrawn with respect to claims 1-14 and 23-32.

**C. Claims 39-60**

Vorenkamp does not describe each and every element as set forth in claim 39. For example, claim 39 recites, in part, that a mixer comprises a track and hold circuit and a bandpass circuit. The Examiner maintains that a track and hold circuit is described in FIGS. 5 and 19; col. 1, line 62 to col. 2, lines 6; and col. 6, line 35 to col. 7, line 41 of Vorenkamp. However, FIGS. 5 and 19 merely illustrate, without detail, a first mixer, a second mixer and a third mixer. In addition, the cited text supporting the rejection fails to mention a track and hold circuit. As set forth in claim 39, the mixer comprises a track and hold circuit and a bandpass circuit. The cited figures do not illustrate nor do the cited text of Vorenkamp describe a mixer comprising such elements. For at least the above reasons, Vorenkamp does not anticipate claim 39.

Since claims 40-60, which depend from claim 39, recite many of the same or similar elements as recited in claims 2-14 and 23-32 and since the Examiner used the same or similar arguments in rejecting claims 40-60 as were used in rejecting claims 2-14 and 23-32, Applicants respectfully make the same or similar arguments with respect to claims 40-60 as were made with respect to claims 2-14 and 23-32. For at least the above reasons, Vorenkamp does not anticipate claims 40-60.

It is therefore respectfully requested that the rejection be withdrawn with respect to claims 39-60

**D. Claim 61**

Vorenkamp does not describe each and every element as set forth in claim 61. For example, claim 61 recites, in part, that a differential mixer comprises a track and hold circuit and

a bandpass circuit. The track and hold circuit comprises a differential signal input, a differential control input and a differential mixed signal output. The Examiner maintains that a track and hold circuit as set forth in claim 61 is described in FIGS. 5 and 19; col. 1, line 62 to col. 2, line 6; and col. 6, line 35 to col. 7, line 41 of Vorenkamp. However, FIGS. 5 and 19 merely illustrate, without detail, a first mixer, a second mixer and a third mixer. In addition, the cited text supporting the rejection fails to mention a track and hold circuit. As set forth in claim 61, the differential mixer comprises a track and hold circuit and a bandpass circuit. The cited figures do not illustrate nor do the cited text of Vorenkamp describe a differential mixer comprising such elements. Furthermore, the cited figures and text do not describe a differential mixer or any of the differential elements of the track and hold circuit. For at least the above reasons, Vorenkamp does not anticipate claim 61.

It is therefore respectfully requested that the rejection be withdrawn with respect to claim 61.

**E. Claims 76-93**

Vorenkamp does not describe each and every element as set forth in claim 76. For example, claim 76 recites, in part, that a mixer comprises track and hold means for tracking and holding a first signal in response to a second signal. The Examiner maintains that the track and hold means as set forth in claim 76 is described in block 506 of FIG. 5 and in block 1916 in FIG. 19 of Vorenkamp. However, block 506, 1916 of FIG. 5, 19, respectively, merely illustrates, without detail, a first mixer. The text corresponding to FIGS. 5 and 19 of Vorenkamp also fails to mention track and hold means. For at least the above reasons, Vorenkamp does not anticipate claim 76.

Since claims 77-93, which depend from claim 76, recite many of the same or similar elements as recited in claims 2-14 and 23-32 and since the Examiner used the same or similar arguments in rejecting claims 77-93 as were used in rejecting claims 2-14 and 23-32, Applicants respectfully make the same or similar arguments with respect to claims 77-93 as were made with respect to claims 2-14 and 23-32. For at least the above reasons, Vorenkamp does not anticipate claims 77-93.

It is therefore respectfully requested that the rejection be withdrawn with respect to claims 76-93.

### III. REJECTION OF CLAIMS 15-22 and 62-69 UNDER 35 U.S.C. § 103(a)

Claims 15-22 and 62-69 stand rejected under 35 U.S.C. § 103(a) as being obvious over Vorenkamp in view of U.S. Patent No. 6,587,678 B1 ("Molnar"). Applicants respectfully traverse the rejection.

As noted above, Vorenkamp is properly classified as a reference under 35 U.S.C. § 102(e) and not as a reference under 35 U.S.C. § 102(b). However, a reference under 35 U.S.C. § 102(e), if used in an obviousness rejection under 35 U.S.C. § 103(a), may be disqualified as a reference under 35 U.S.C. § 103(c).

35 U.S.C. § 103(c) states that "[s]ubject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

Applicants respectfully submit that Vorenkamp is disqualified as a reference under 35 U.S.C. § 103(a) in view of 35 U.S.C. § 103(c). As indicated on the face of the patent, the subject matter of Vorenkamp was assigned solely to the Broadcom Corporation of Irvine, California. On the filing date (i.e., October 27, 2000) of the present application (i.e., Application Ser. No. 09/698,550), the claimed invention was owned or subject to an obligation of assignment solely to the Broadcom Corporation of Irvine, California. The Examiner is invited to examine the recorded assignment document at Reel/Frame No. 011595/0804, executed November 20, 2000 and recorded March 13, 2001 for the present application. Additional information about the parent application of the present application or priority documents (e.g., provisional applications) of the parent application can be provided, if requested by the Examiner; however, M.P.E.P. 706.02(I)(1)<sup>1</sup> appears to support the contention that the claimed invention need only be owned by the same person or subject to an obligation of assignment to the same person as of the filing day of the continuing application.

<sup>1</sup> M.P.E.P. § 706.02(I)(1) states that "[t]he mere filing of a continuing application on or after November 29, 1999, with the required evidence of common ownership, will serve to exclude commonly owned 35 U.S.C. 102(e) prior art that was applied, or could have been applied, in a rejection under 35 U.S.C. 103 in the parent application."

Since the Examiner cannot maintain an obviousness rejection over Vorenkamp in view of Molnar, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 15-22 and 62-69.

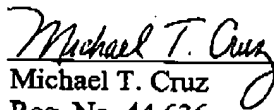
IV. CONCLUSION

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-93 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

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Respectfully submitted,

  
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